

002227-6388463

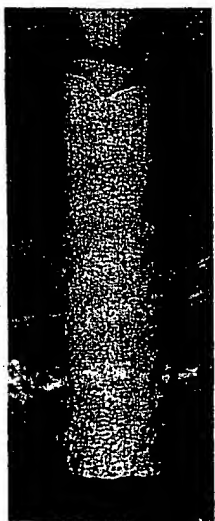
UPSTREAM

HEAT - AFFECTED PART

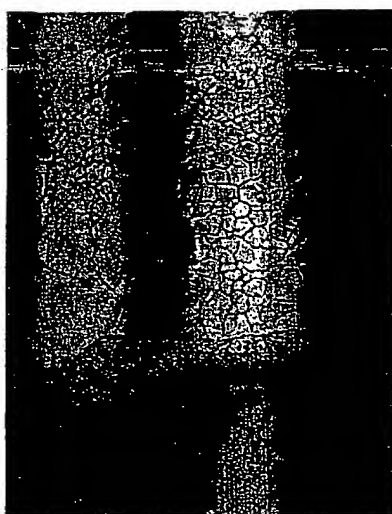
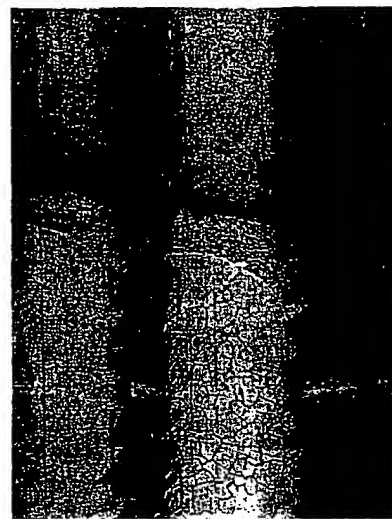
WELDED PART

DOWNSTREAM

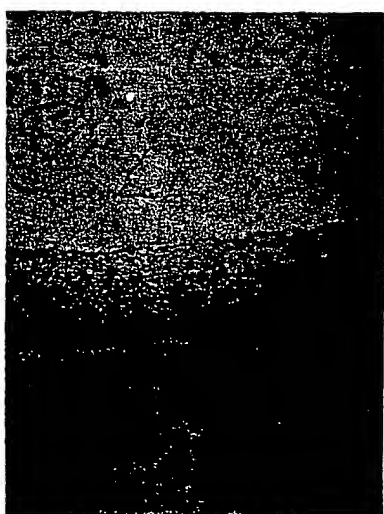
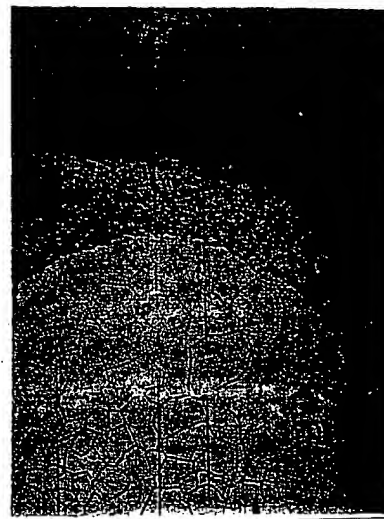
HEAT - AFFECTED PART



x 50



x 100



x 200

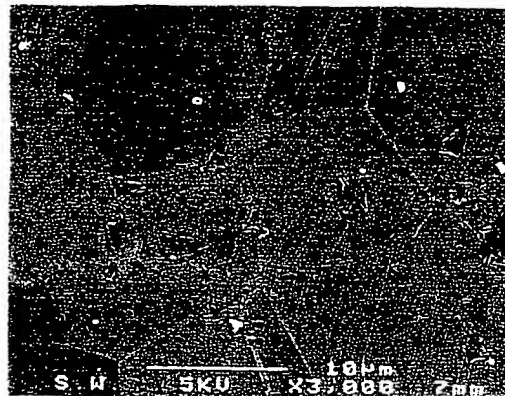
F i g . 1

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Fig. 2

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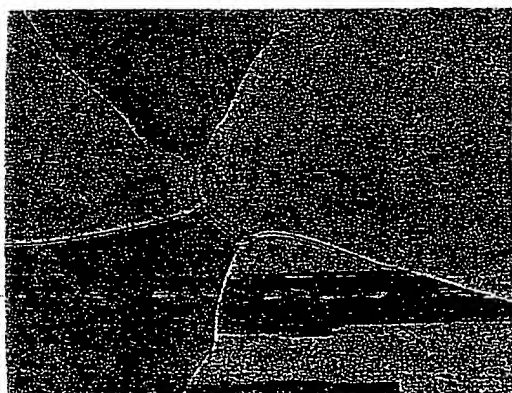
DOWNSTREAM



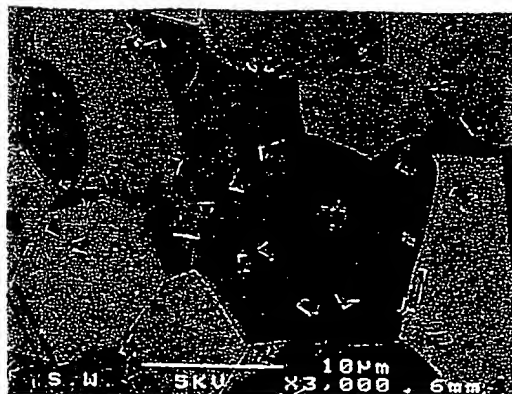
5mm



3mm

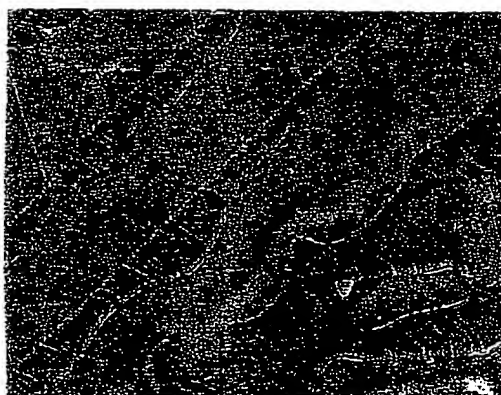


3mm



5mm

WELDED PART



[BACK SHIELD GAS :
100 % Ar]

UPSTREAM

0074883-13700

PARTICLE MEASUREMENTS AT WELDED PARTS

AT WELDING COMDITIONS (30rpm × 1rev.BEAD WIDTH 1mm) 9 WELDED SPOTS

FLOW RATE: 0.1cf/min (U - N₂), PARTICLE MEASUREMENT: 0.1 μm OR LARGER

BASE METAL	STAINLESS STEEL TUBU SUBJECTED TO FLUGRIED PASSIVATION TREATMENT					REGULAR STAINLESS STEEL
	NO WELDING	CONVENTIONAL WELDING METHOD	WELDING AFTER FILM REMOVAL WITH HOT WATER (80°C)	WELDING AFTER FILM REMOVAL WITH 0.5%HF/ 10%H ₂ O ₂	WELDING METHOD WITH 5% ADDED H ₂	CONVENTIONAL WELDING METHOD
NO HAMMERING (10min)	0	0	0	0	0	0
WITH HAMMERING (10min)	0	60	0	0	0	0

F i g . 4

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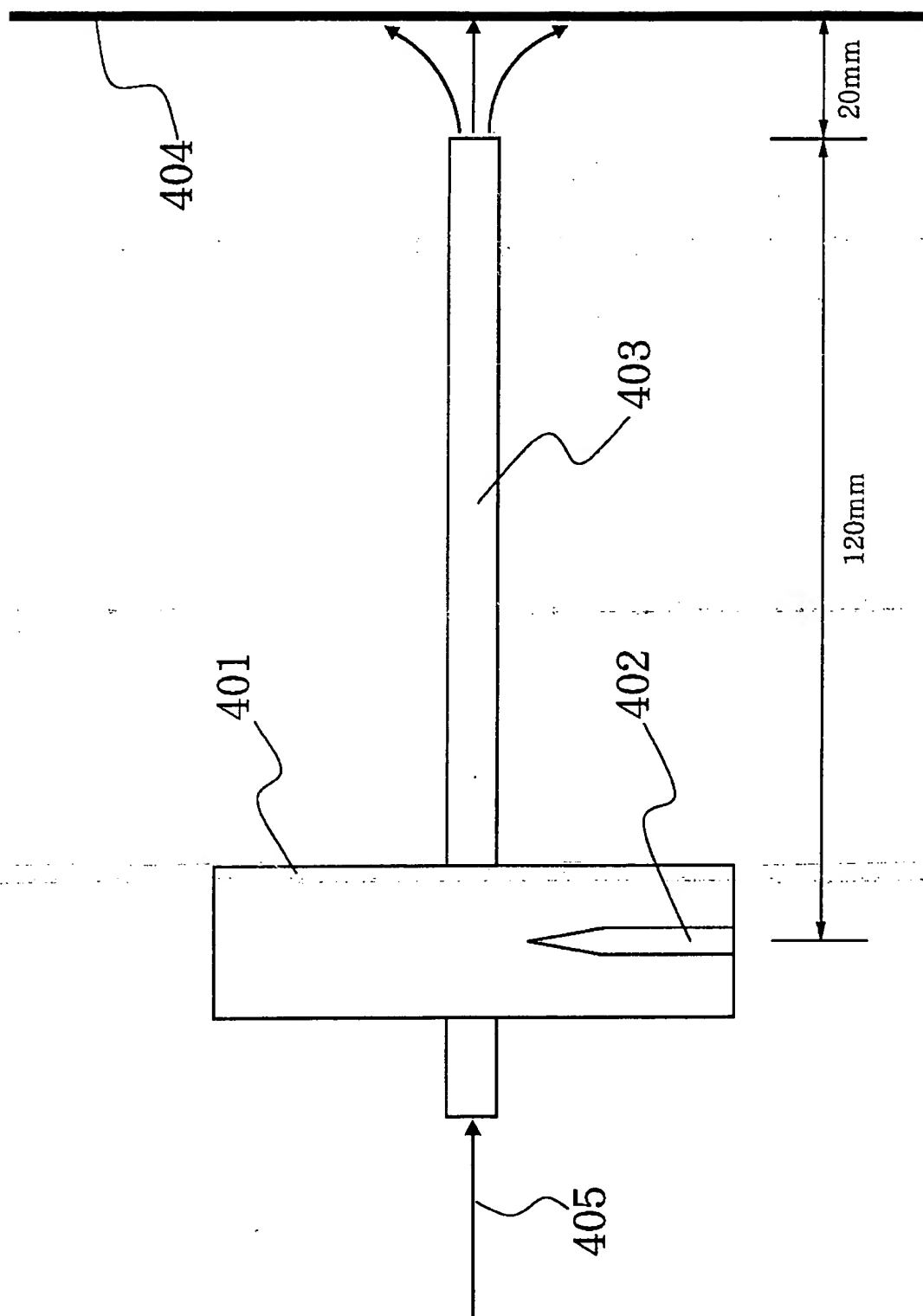
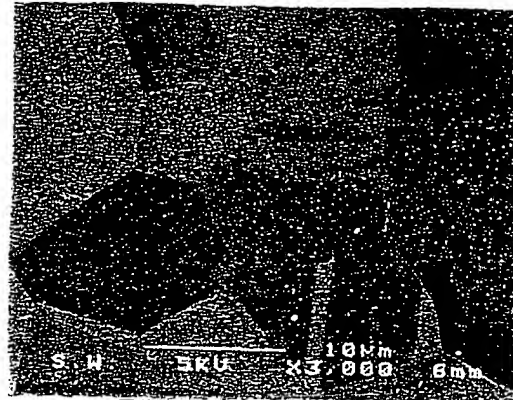


Fig. 5

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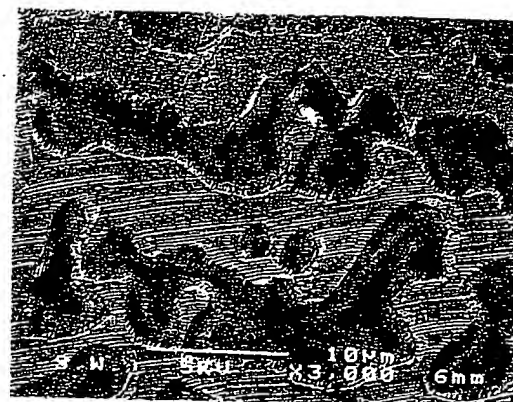
DOWNSTREAM



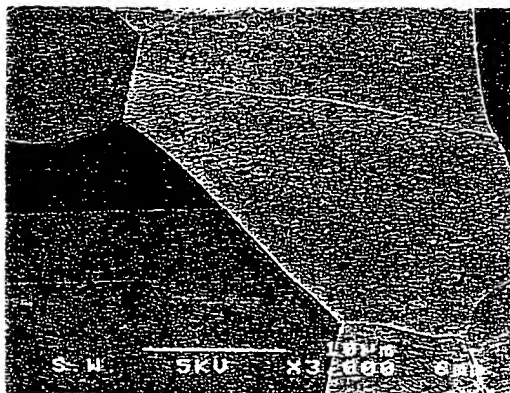
5mm



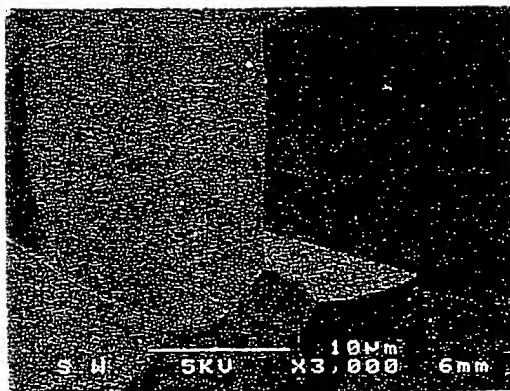
3mm



WELDED PART



3mm



5mm

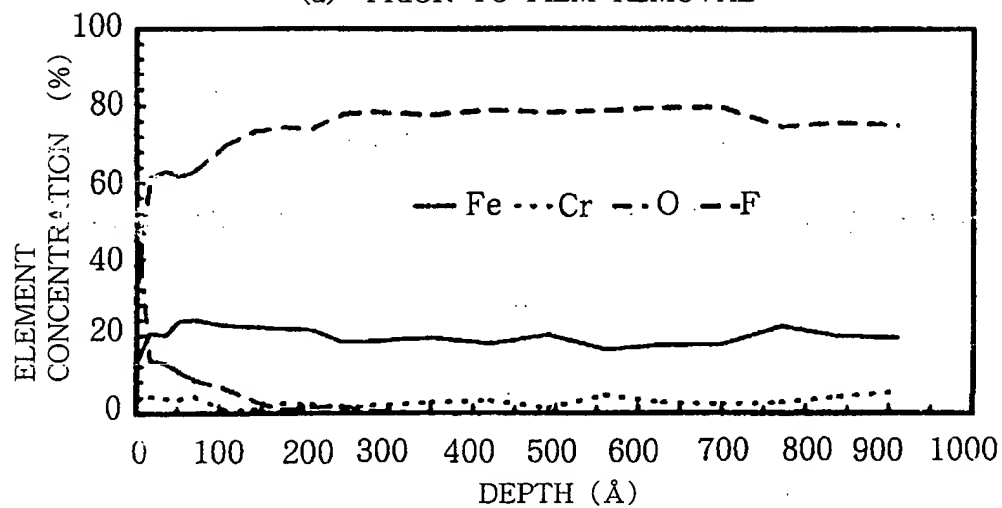
UPSTREAM

[BACK SHIELD GAS :
5 % H₂/Ar]

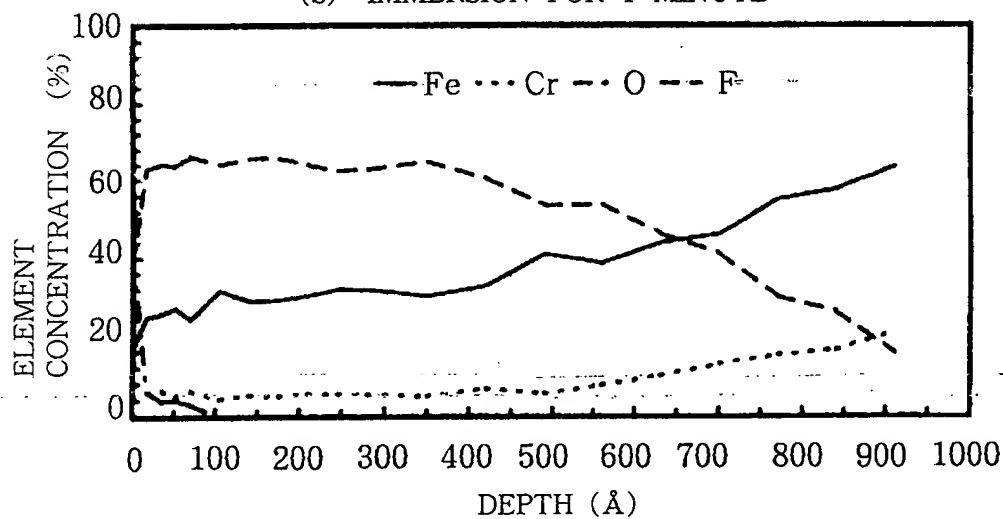
00748003-12700

REMOVAL OF FLUORIDE PASSIVATED
FILM USING HOT WATER (80°C)

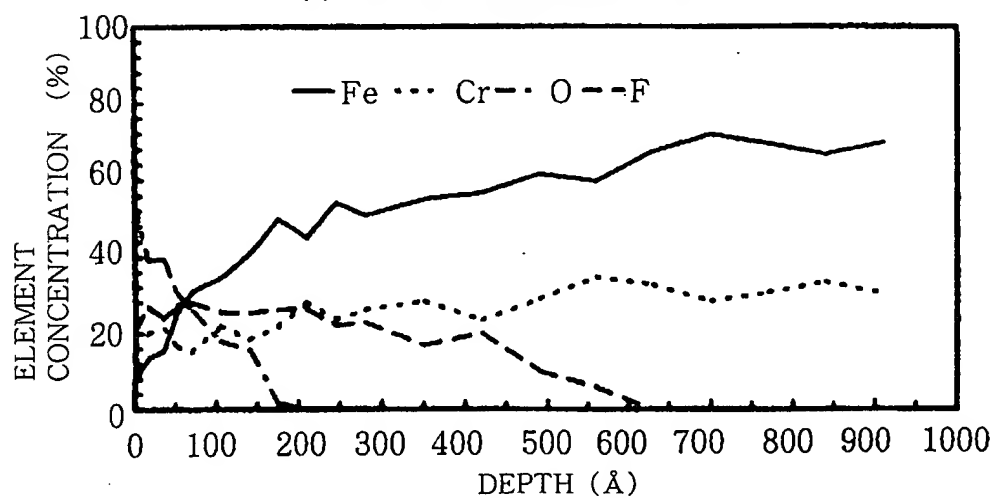
(a) PRIOR TO FILM REMOVAL



(b) IMMERSION FOR 1 MINUTE

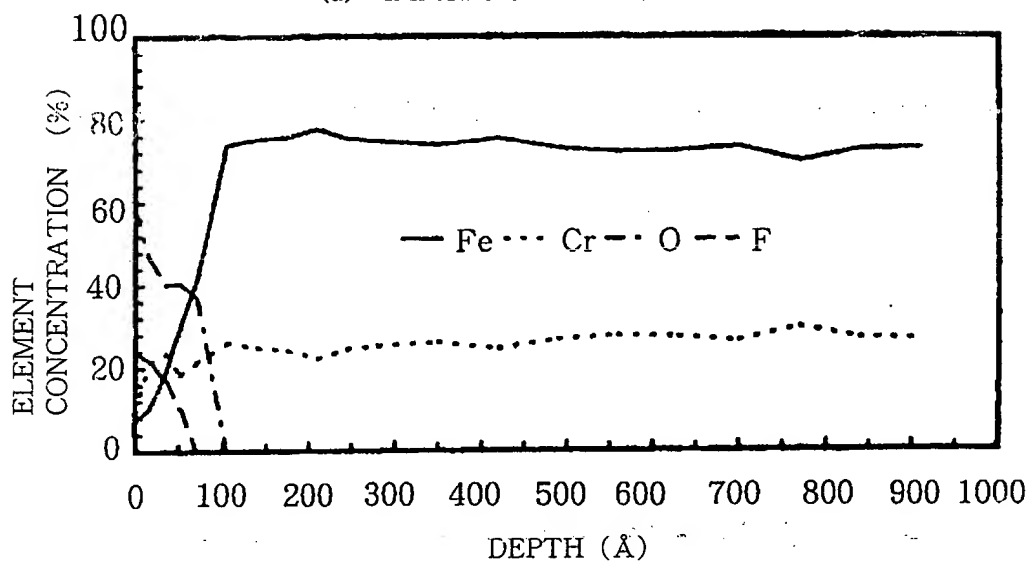


(c) AFTER IMMERSION FOR 3 MINUTES

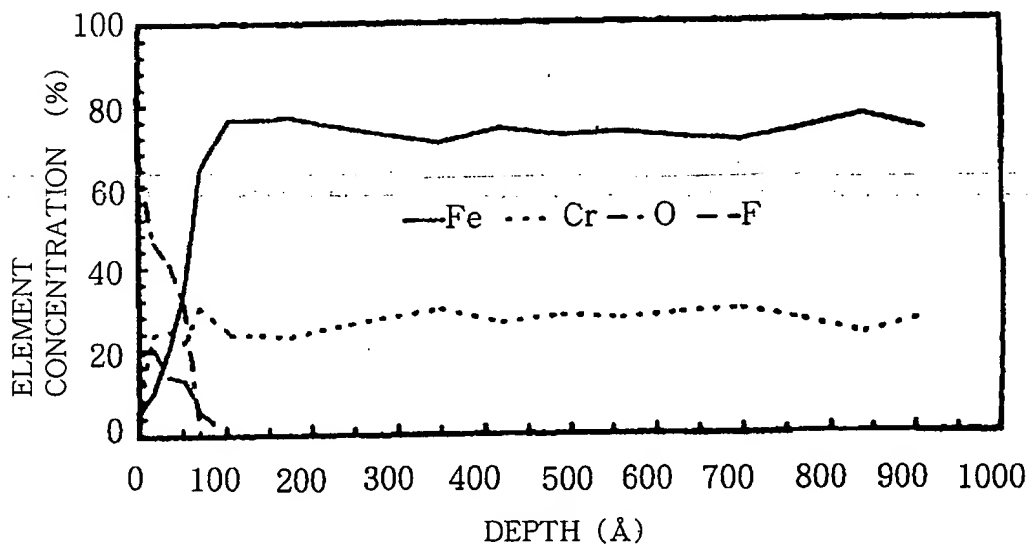


REMOVAL OF FLUORIDE PASSIVATED
FILM USING HOT WATER (80°C)

(a) IMMERSION FOR 5 MINUTES

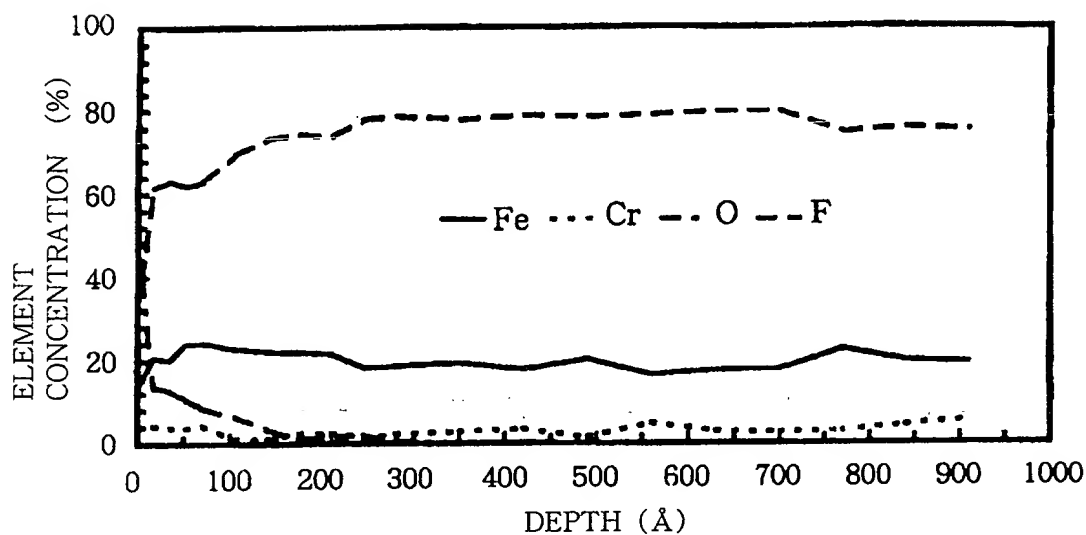


(b) IMMERSION FOR 10 MINUTES

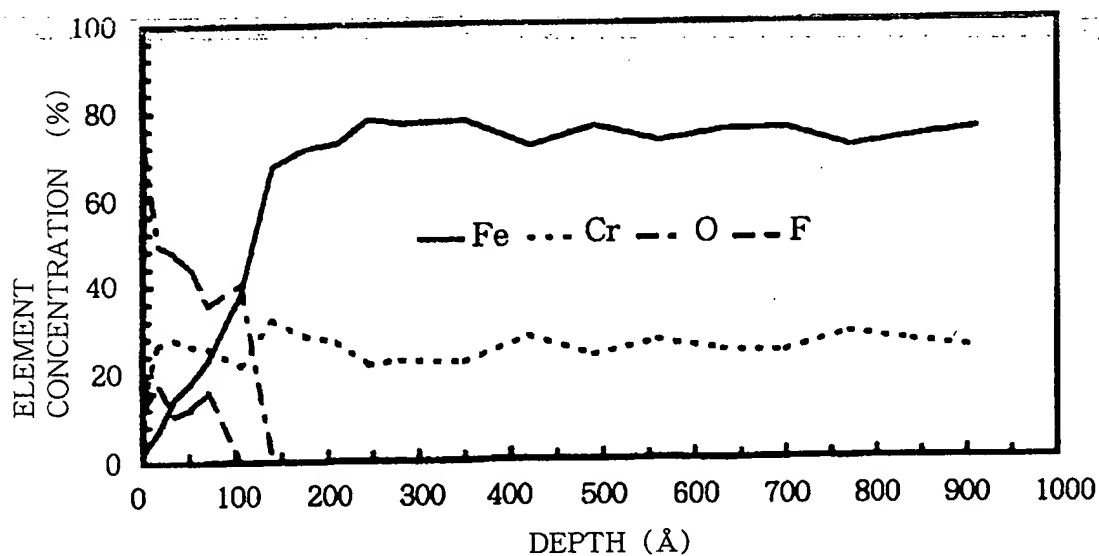


REMOVAL OF PASSIVATED FILM USING A MIXED
AQUEOUS SOLUTION OF 0.5% HYDROFLUORIC
ACID AND 10% HYDROGEN PEROXIDE

(b) PRIOR TO FILM REMOVAL



(b) IMMERSION FOR 10 MINUTES



DOWNSTREAM
HEAT - AFFECTED PART

(IMMERION FOR 10 MINUTES IN
A MIXED AQUEOUS SOLUTION
OF 0.5 % HYDROFLUORIC ACID
AND 10 % HYDRGEN PEROXIDE)

UPSTREAM HEAT - AFFECTED PART

WELDED PART

$\times 50$

x 100

x 200

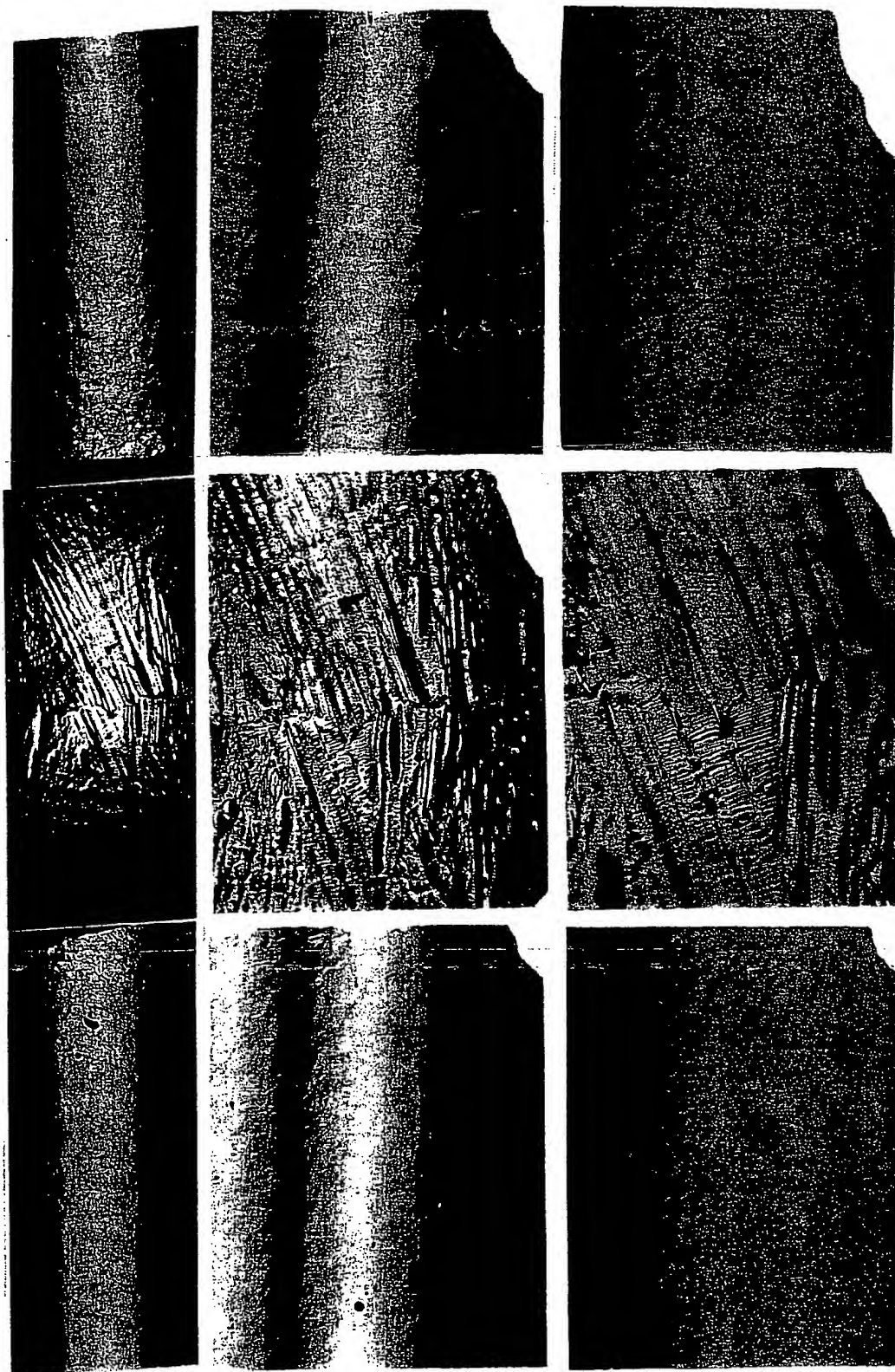
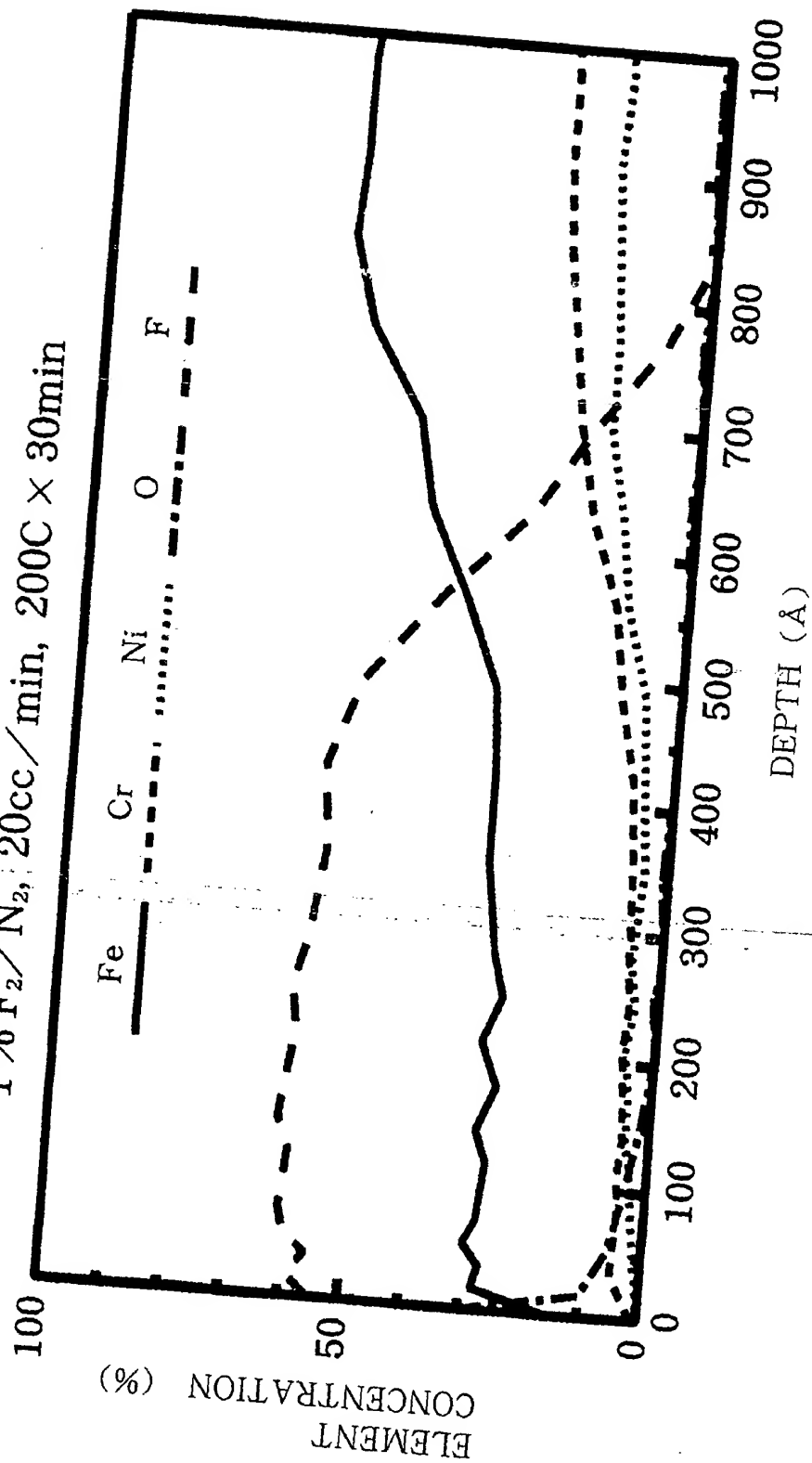


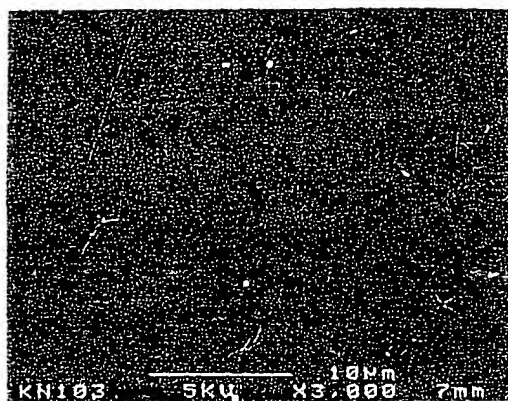
Fig. 11

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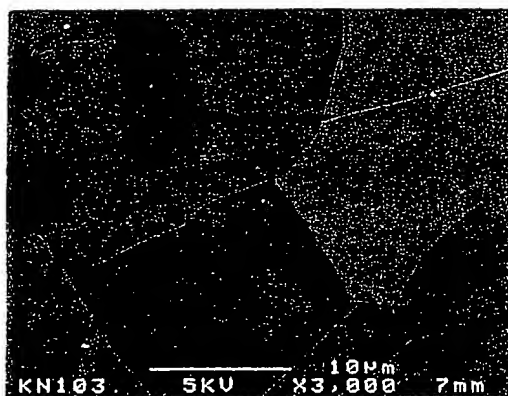
FLUORIDE PASSIVATION RETREATMENT
OF THE WELDED PART
1% F₂/N₂, 20cc/min, 200C × 30min



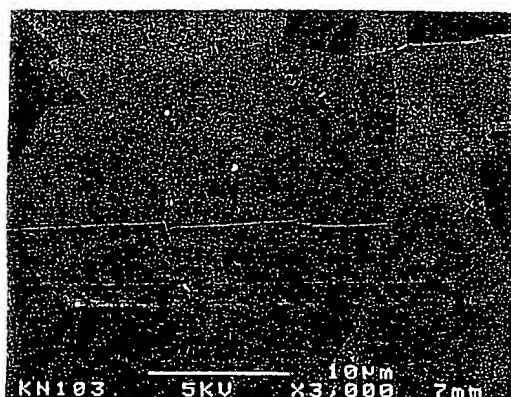
DOWNSTREAM



5mm



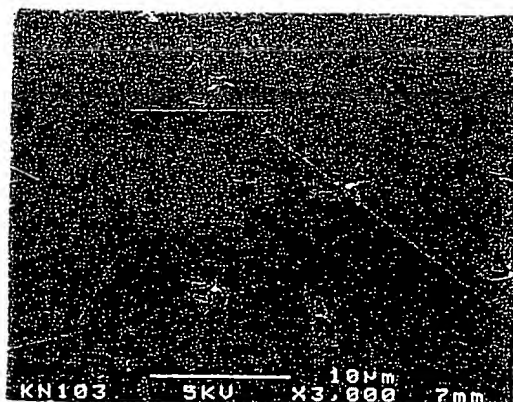
3mm



3mm



WELDED PART



5mm

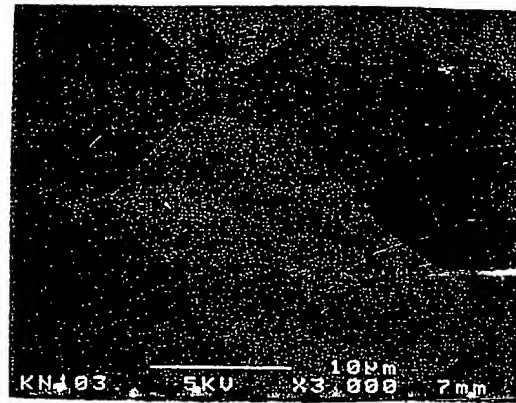
UPSTREAM

[BACK SHIELD GAS :
0.1 % H₂/Ar]

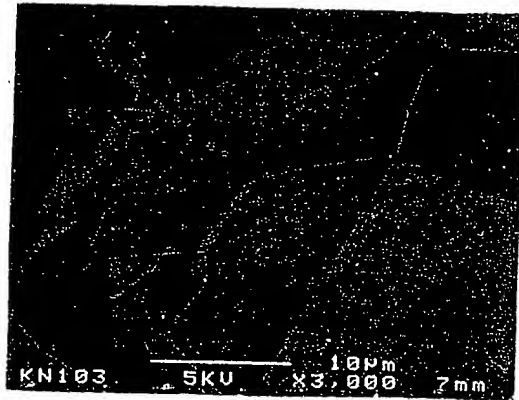
Fig. 13

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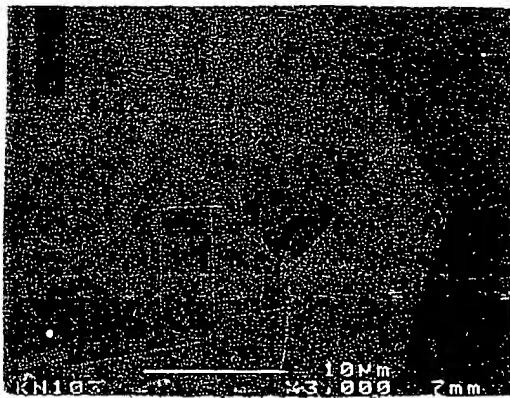
DOWNSTREAM



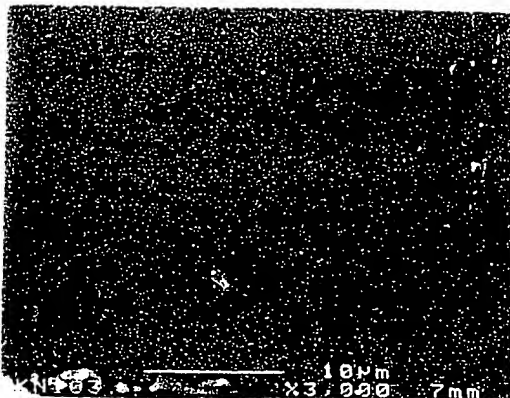
5mm



3mm

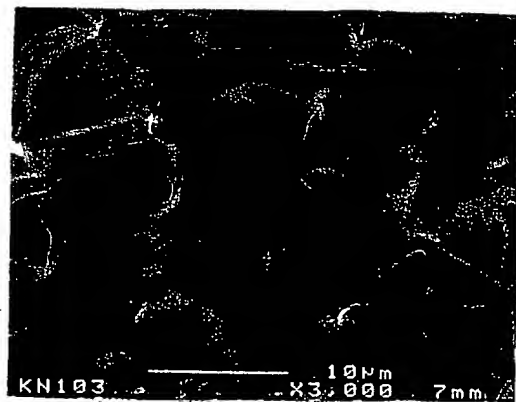


3mm



5mm

UPSTREAM



WELDED PART

[BACK SHIELD GAS :
0.5 % H₂/Ar]

004337 0000460